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EXAMINER
BENGZON, GREG C

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)	
Office Action Summary	10/574,293	WANG ET AL.	
	Examiner	Art Unit	
	GREG BENGZON	2444	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>19 January 2010</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-18</u> is/are pending in the application.

　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-18</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　a) ☐ All b) ☐ Some * c) ☐ None of:

　　1. ☐ Certified copies of the priority documents have been received.

　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.

　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/19/2009</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail. Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

This application has been examined. Claims 1-18 are pending. Claims 19-22 are cancelled.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/19/2010 has been entered.

Response to Arguments

Applicant's arguments filed 01/19/2010 have been fully considered but they are moot in view of the new grounds for rejection.

The Examiner acknowledges the amendments to the Specification filed 04/16/2009 regarding the computer-readable medium. However the amendments are not sufficient to overcome the USC 101 issues shown below.

With respect to the newly filedclaim amendments Srikantan Paragraph 53 disclosed monitoring a server port (Paragraph 53) wherein one processor thread

(Paragraph 9) is shared among the sockets for detecting events and notifying event consumers. Also, a pool of threads is allocated for executing tasks issued by the various event consumers. Each socket is associated with an event consumer object that is notified when an event is received at the socket. The event consumer objects invoke task objects to handle the events.

Srikantan disclosed receiving content at the server ('uploading') (Paragraph 25,Paragraph 32) multicasting, and/or unicasting said content. While Srikantan did not explicitly disclose an upload handler, a multicasting handler and a unicast handler it would have been obvious that Srikantan recognizes that receiving content, multicasting, and/or unicasting said content as distinct event types (Paragraph 37) and would require separate task objects ('event handlers').

Thus Srikantan disclosed (re. Claim 1) *executing a multi-threaded application* (Srikantan-Paragraph 19-*socket that receives event may spawn one or more tasks to handle the event*) *with at least one thread monitoring a port* (Srikantan-Paragraph 53,*listen for events at a server port*) *designated for receiving multicast requests;*(Srikantan-Paragraph 9, *wherein one processor thread is shared among the sockets for detecting events and notifying event consumers*) *executing at least three request handlers to manage requests from remote devices, the at least three request handlers comprising an upload request handler,* (Srikantan-Paragraph 32,*receiving media packets via an RTP connection'*) *a multicast download request handler* (Srikantan-Paragraph 25,*multicasting content to users implemented by task objects*)

and a unicast download request handler.(Srikantan-Paragraph 25,*unicasting content to*

users implemented by task objects).

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Priority

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This application claims benefits of priority from PCT Application PCT/CN05/0026

filed March 5, 2005.

The effective date of the claims described in this application is March 5, 2005.

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Claim Rejections - 35 USC § 101

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35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 14-18 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claims 14-18 pertain to '*a computer-readable medium having stored thereon*

computer-executable instructions'. Upon inspection of the Applicant Specifications

(Page 12, Paragraph 30, '*any mechanism that provides* ') the Examiner interprets the

computer-readable medium being possibly embodied by, <u>but is not limited to</u>, RAM,

ROM, etc. Thus applying the broadest reasonable interpretation in light of the

specification and taking into account the meaning of the words in their ordinary usage

as they would be understood by one of ordinary skill in the networking art, the claim as

a whole covers <u>both transitory and non-transitory media </u>including those entirely of

transmission mediums such carrier waves. The Examiner notes that transmission

mediums embodying computer-executable instructions are non-statutory subject matter

because they do not fall into any of the categories of statutory subject matter.

The Examiner notes that where carrier waves are concerned, the transmission

medium is an embodiment of a data signal.   Absent some physical context, a signal per

se is an abstract idea in much the same way that a mathematical algorithm without

context is an abstract idea.

The claims may be amended by changing '*computer readable medium*' to -- '<u>*non*</u>

<u>*transitory* </u>*computer readable medium*' -- thus excluding that portion of the scope

covering transitory signals. The scope of the disclosure given the state-of-the-art

covers both transitory and non-transitory media, and this amendment would limit the

claims to an eligible (i.e. non-transitory) embodiment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2,4-5,7-9,11-12, 14-15,17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Riedle (US Patent 6983334) further in view of Paek (US Publication

2005/0177625) further in view of Miller1 (US Patent 6151696) further in view of Miller2

(US Patent 5920701) further in view of Srikantan (US Publication 20010029548).

Riedle disclosed (re. Claim 1) a method comprising: receiving a request from a

first client device to multicast a file as a plurality of packets of data from a server device

to multiple client devices; (Riedle-Column 1 Lines 35-55) transmitting the plurality of

packets of data from a server to the multiple client devices using a multicast trivial file

transfer protocol (TFTP); (Riedle-Column 1 Lines 35-55)

While Riedle substantially disclosed the claimed invention Riedle did not disclose

(re. claim 1) applying, by the server, one or more flow control techniques not defined by

the multicast TFTP.

Paek disclosed (re. Claim 1) applying, by the server, one or more flow control

techniques not defined by the multicast TFTP. (Paek-Figure 4, Paragraph 122)

Riedle and Paek are analogous art because they present concepts and practices

regarding flow control using TFTP. At the time of the invention it would have been

obvious to combine Paek into Riedle. The motivation for said combination would have

been to enable a broadcasting function, which allows files to be transferred through

broadcast when multiple clients simultaneously request file transmission to one server, resulting in a simple operation as compared to using multicast. (Paek-Paragraph 32)

While Riedle-Paek substantially disclosed the claimed invention Riedle-Paek did not disclose (re. Claim 1) wherein the flow control comprises at least determining whether the server device has sufficient resources to satisfy the request based on a block size corresponding to the request and an available bandwidth, and sending an error packet to the first client device if the server does not have sufficient resources to satisfy the request'

Miller1 disclosed (re. Claim 1) wherein the flow control comprises at least determining whether the server device has sufficient resources to satisfy the request based on a block size corresponding to the request (Miller-Column 10 Lines 40-55) and an available bandwidth (Miller-Figure 4,Column 8 Lines 1-5).

Miller1 disclosed a flow control method for data transmission wherein the block sizes are determined along with the transmission rate in order to regulate the transmission flow.

Furthermore Miller2 disclosed (re. Claim 1) sending an error packet to the first client device if the server does not have sufficient resources to satisfy the request' (Miller2-Column 12 Lines 10-25)

Riedle, Paek, Miller are analogous art because they present concepts and practices regarding flow control for multicasting. At the time of the invention it would have been obvious to combine Riedle-Paek into the disclosure by Miller. The motivation for said combination would have been to enable flow control at the replicated

servers which account for availability of resources required to transmit a certain amount of data indicated in the transmission request. (Miller-Column 3 Lines 45-55)

While Riedle-Paek-Miller1-Miller2 substantially disclosed the claimed invention Riedle-Paek-Miller1-Miller2 did not disclose (re. Claim 1) *executing a multi- threaded application with at least one thread monitoring a port designated for receiving multicast requests; executing at least three request handlers to manage requests from remote devices, the at least three request handlers comprising an upload request handler, a multicast download request handler and a unicast download request handler.*

Srikantan Paragraph 53 disclosed monitoring a server port (Paragraph 53) wherein one processor thread (Paragraph 9) is shared among the sockets for detecting events and notifying event consumers. Also, a pool of threads is allocated for executing tasks issued by the various event consumers. Each socket is associated with an event consumer object that is notified when an event is received at the socket. The event consumer objects invoke task objects to handle the events.

Srikantan disclosed receiving content at the server ('uploading') (Paragraph 25,Paragraph 32) multicasting, and/or unicasting said content. While Srikantan did not explicitly disclose an upload handler, a multicasting handler and a unicast handler it would have been obvious that Srikantan recognizes that receiving content, multicasting, and/or unicasting said content as distinct event types (Paragraph 37) and would require separate task objects ('event handlers').

Thus Srikantan disclosed   (re. Claim 1) *executing a multi-threaded application* (

Srikantan-Paragraph 19-*socket that receives event may spawn one or more tasks to*

handle the event) with at least one thread monitoring a port (Srikantan-Paragraph

53,*listen for events at a server port) designated for receiving multicast*

requests;(Srikantan-Paragraph 9, *wherein one processor thread is shared among the*

sockets for detecting events and notifying event consumers) executing at least three

request handlers to manage requests from remote devices, the at least three request

handlers comprising an upload request handler, (Srikantan-Paragraph 32,*receiving*

media packets via an RTP connection') *a multicast download request handler*

(Srikantan-Paragraph 25,*multicasting content to users implemented by task objects*)

and a unicast download request handler.(Srikantan-Paragraph 25,*unicasting content to*

users implemented by task objects).

Claim 8 (re. server) is rejected on the same basis as Claim 1.

Claim 14 (re. computer-readable media) is rejected on the same basis as Claim

1.

Claim 19 (re. system) is rejected on the same basis as Claim 1.

Riedle-Paek-Miller1-Miller2 disclosed (re. Claim 2,9,15,20) delaying a start of the

transmission of the plurality of packets. (Paek-Figure 4, Paragraph 122)

Riedle-Paek- Miller1-Miller2 disclosed (re. Claim 4,11, 17,21) modifying quality of

service based, at least in part, on resource conditions. (Riedle-Column 8 Lines 15-55)

Riedle-Paek-Miller1-Miller2 disclosed (re. Claim 5,12) wherein modifying the

quality of service comprises one or more of: modifying block size (Riedle-Column 8

Lines 15-25,'*group size adjusted dynamically*') and modifying timeout length. (Paek-

Paragraph 111-113)

Riedle-Paek-Miller1-Miller2 disclosed (re. Claim 7) retransmitting a most recently

transmitted packet in response to receiving an unexpected packet. (Riedle-Column 11

Lines 10-20)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 3,6, 10,13,16,18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Riedle (US Patent 6983334) further in view of Paek (US Publication

2005/0177625) further in view of Miller1 (US Patent 6151696) further in view of Miller2

(US Patent 5920701) further in view of Srikantan (US Publication 20010029548) further

in view of Xu (US Publication 2007/0198737).

While Riedle-Paek-Miller1-Miller2-Srikantan substantially disclosed the claimed

invention Riedle-Paek-Miller1-Miller2-Srikantan did not disclose (re. Claim 3,10, 16)

determining whether a request to download the file is a subject of an existing multicast

download session; and causing the multiple client devices to join an existing multicast
group corresponding to the existing multicast download session.

Xu disclosed (re. Claim 3,10, 16) determining whether a request to download the
file is a subject of an existing multicast download session; and causing the multiple
client devices to join an existing multicast group corresponding to the existing multicast
download session. (Xu-Paragraph 15-16, Paragraph 89)

Riedle,Paek,Miller,Srikantan and Xu are analogous art because they present
concepts and practices regarding flow control using multicasting protocols. At the time
of the invention it would have been obvious to combine Xu into Riedle-Paek-Miller-
Srikantan. The motivation for said combination would have been to enable
conferencing data to be re-transmitted to a child computer system via uni-cast when it is
indicated that a multi-cast packet is not received. (Xu-Paragraph 14)

Riedle-Paek-Miller1-Miller2-Srikantan-Xu disclosed (re. Claim 6,13,18) reducing
a packet transmission rate. (Xu-Paragraph 99)

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in
the references applied to the claims above for the convenience of the applicant.
Although the specified citations are representative of the teachings of the art and are
applied to specific limitations within the individual claim, other passages and figures

may apply as well. It is respectfully requested from the applicant in preparing

responses, to fully consider the references in entirety as potentially teaching all or part

of the claimed invention, as well as the context of the passage as taught by the prior art

or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully

requested to indicate the portion(s) of the specification which dictate(s) the structure

relied on for proper interpretation and also to verify and ascertain the metes and bounds

of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Please refer to the enclosed PTO-892 form.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to GREG BENGZON whose telephone number is

(571)272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30

PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

   Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

   /Greg   Bengzon/
   Examiner, Art Unit 2444